D-iDRAFT MANUAL <u>FOR FIELDTEST</u>

Pos.	D-iDRAFT System
1.	WebApp *(Screen not included in delivery)*
2.	Tap
3.	Keg Coupler
4.	Keg Spear
5.	Gateway

Read the following instructions carefully and store them well.

1. General

Thank you for choosing D-iDRAFT and giving trust to DispTek, helping you to improve the Dispensing.

The D-iDRAFT System offers a standard and easy to replace dispensing hardware, with smart technology to monitor quality and create value to brewery or franchises in terms of marketing information and supply chain of kegs.

For operating the D-iDRAFT Systems you need basic knowledge of beverage dispensing systems as well as smart app´s and you have to respect to mentioned details in this instruction. For Installation/Start-Up and Service of the System, ask DispTek or a qualified dispense system technician.

Only original spare parts may be used.

2. Description

What you need:

- A power supply (110-230 V/AC) for the Gateway, close to the place where the beer installation (Keg, Coupler, Gas, etc.) is made.
- Internet connections with local WiFi or LAN/Ethernet or 4G mobile Network, to get the Gateway online.
- 3x AAA / Micro / LR03 Batteries for each of the Taps
- Less than 20m distance between Gateway and Taps for Bluetooth transmission, with max. two walls/ceilings.
- To run the WebApp you need web access with a mobile device (smart phone, tablet) or a PC/Notebook.

Gateway:

The Gateway will collect the data for up to 6x beverage lines and upload them to the WebApp. In case of more than 6 lines, you simply install multiple Gateways. Inside the WebApp during Start-up, multiple Gateways per location can be selected. To do so, the serial number/EUI per Gateway is needed and written on the device. The Gateway is designed to install it on the wall and standard wall plugs will be given with the unit. Please make sure if this version of plugs will fit with the type of wall you want to fix to. The standard version will come with WiFi and LAN/Ethernet connection. We offer the Gateway as well with 4G mobile network connection (SIM Card included) to upload data. It is able to run all over European Union. And a US version will be available soon. This shall be chosen if local WiFi or LAN/Ethernet are not available at the location. The Gateway will be supplied with a power supply adapter to reduce current to 5 V/DC (3 Ampere) and will have 4 different country variants of plug (AU, EU, US, UK). For increasing the WiFi signal, we offer an external antenna possible to connect to the antenna plug of the Gateway. And in case of the 4G mobile network version, the external antenna will be connected always. Fixing the cables where the Keg couplers are connected with, is easily made along the gas line by using cable strips, as part of the delivery.

At the bottom of the unit, you will find up to 6 cable sockets for connecting the Couplers. Each connection has a LED to show the status of being connected. The cable to connect the couplers can be selected from three different length: 5, 10 or 15 meters. At the right side of the unit, you´ll find the LAN connection, in case you are going to use this. As well, two LEDs are located there. One for the status of being connected (green = ON, red = OFF) and the second one for connecting uploading indication blinking = CONNETING. Then two buttons are available: One to turn the unit on or off and the second one to start-up the WiFi connection Mode. And the 5 V/DC power supply will be made with the USB-C connector, with LED right to it, showing the Power Status on/off

Be aware that only electrical service staff is allowed to open the Gateway. The unit is IP54 class secured.

| Pos.	D-iDRAFT GATEWAY
5.1	Antenna connector
5.2	Power Supply, USB-C and Status LED
5.3	ON/OFF Button
5.4	WiFi Connector / various Button
5.5	2x LED: Status and upload
5.6	LAN Connector
5.7	6x Coupler Connector
5.8	6x Status LED Coupler
5.9	EUI / serial number

Tap:

The Tap is made of the Standard FLUX version, available as Stainless-Steel or plated Brass, and the Nozzle Kit attachment. Here inside is the Nozzle equipped with the sensors and beside of that, the electronic, batteries and Bluetooth device. Further the Tap has a LED showing the Status of the device and a front button to send data once to the Gateway (like a ping). Status of the LED: LED off = Tap off // LED green blinking slow = Tap on // LED red blinking fast = error // LED red &green blinking slow = battery < 20%. The Nozzle Kit is placed inside a Housing easy to attach and to remove in one, from the Tap (equally for cleaning purposes). The adaption is made with double O-Ring sealing and an additional holder cap on top around the handle. The unit is IP54 class secured.
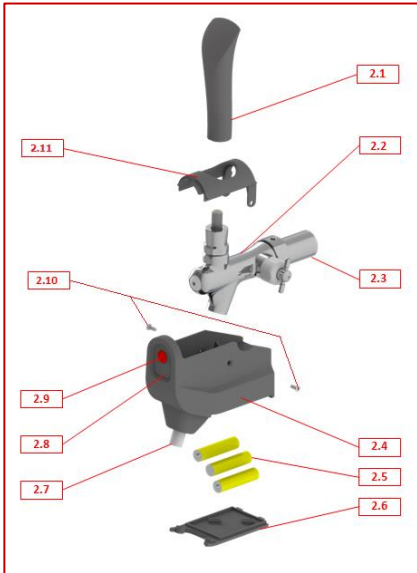
Pos.	D-iDRAFT TAP
2.1	Handle
2.2	Tap
2.3	Shank
2.4	Housing
2.5	3x Batteries
2.6	Battery Lid
2.7	Nozzle
2.8	LED
2.9	Front button
2.10	Side screws
2.11	Cap

Coupler:

The Coupler is designed in plastic to reach functionality and will be possible to equip with Pistons to support S-Type or D-Type valves. Further two different versions will be available. The Version-1 will have the flow reading as well as the gas pressure sensor, both assembled to a cable socket to attach the connection cable to the Gateway. The Version-2 will have, in addition to Version-1, the NFC Antenna. With this you can support the reading of the NFC Keg-Spears where useful data can be written to, by the brewery. This Version-2 will come with an advanced electronic, supporting the same cable connection to the Gateway. The version you have in place is important to be set inside the WebApp for the Gateway installed. The units are IP54 class secured.
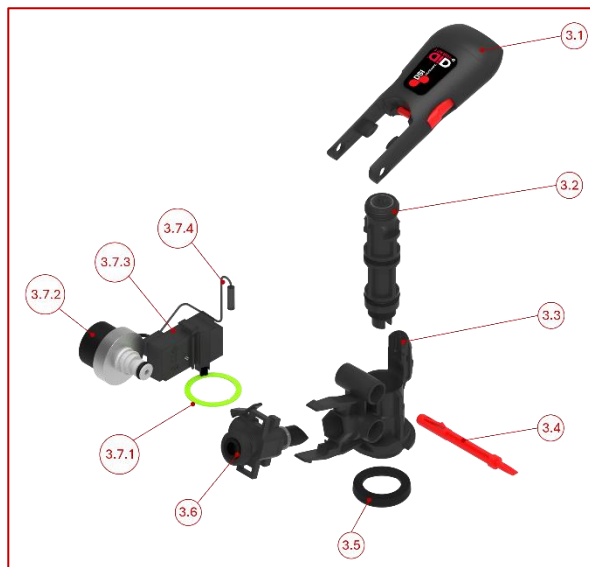
| Pos.	D-iDRAFT COUPLER v1 – non NFC		Pos.	D-iDRAFT COUPLER v2 – NFC
3.1	Handle		3.1	Handle
3.2	Probe (with Magnet NRV inside)		3.2	Probe (with Magnet NRV inside)
3.3	Body		3.3	Body
3.4	Axis and O-Ring tool		3.4	Axis and O-Ring tool
3.5	CO2 Seal		3.5	CO2 Seal
3.6	Gas Adapter with NRV		3.6	Gas Adapter with NRV
3.7.1	Pressure sensor		3.7.1	NFC Antenna
3.8.2	Electronic v1		3.7.2	Pressure sensor
3.8.3	Flow Sensor		3.7.3	Electronic v2
-/-			3.7.4	Flow Sensor
-/-			-/-	
-/-			-/-	

NRV = non-return-valve

WebApp:

With the Web based application we offer the insides of your dispensing system. You will be able to see live status from everywhere you like, make settings and receive helpful and important notifications. For instance, you will be able to make the virtual Keg-Change inside the WebApp, adjust the flow rates, telling the system the brand and Keg size you have connected. This will be a part of automatic reading and setting with the advanced NFC Version-2, in case the Kegs are equipped with the spears. Further you can manage your thresholds to receive warning, if: running out of beer, cooling temperature is out of target, overrun of best-before-date of the beer, etc.

Further the WebApp will show you / the barkeeper the light statistic of poured volumes and brands with a kind of history data.

For the Brewery/Franchiser the information will consist of locations equipped with D-iDRAFT. Here you can work out a reporting according to your needs together with DispTek being in place and live in the WebApp. For instance, the poured volumes according to brands, locations, different dates, etc. are able to choose. This will help very much in Marketing the beverages right on the needs. And in addition to this, the emptied keg counter per location will help to manage the Keg supply chain properly and therewith increase the total number of cycles per Keg.

The WebApp will also be an important part of the start-up for each location manager/Barkeeper. The Web Service is designed by our cooperation Partner GapDraught and hosted via AWS.

MICRO MATIC
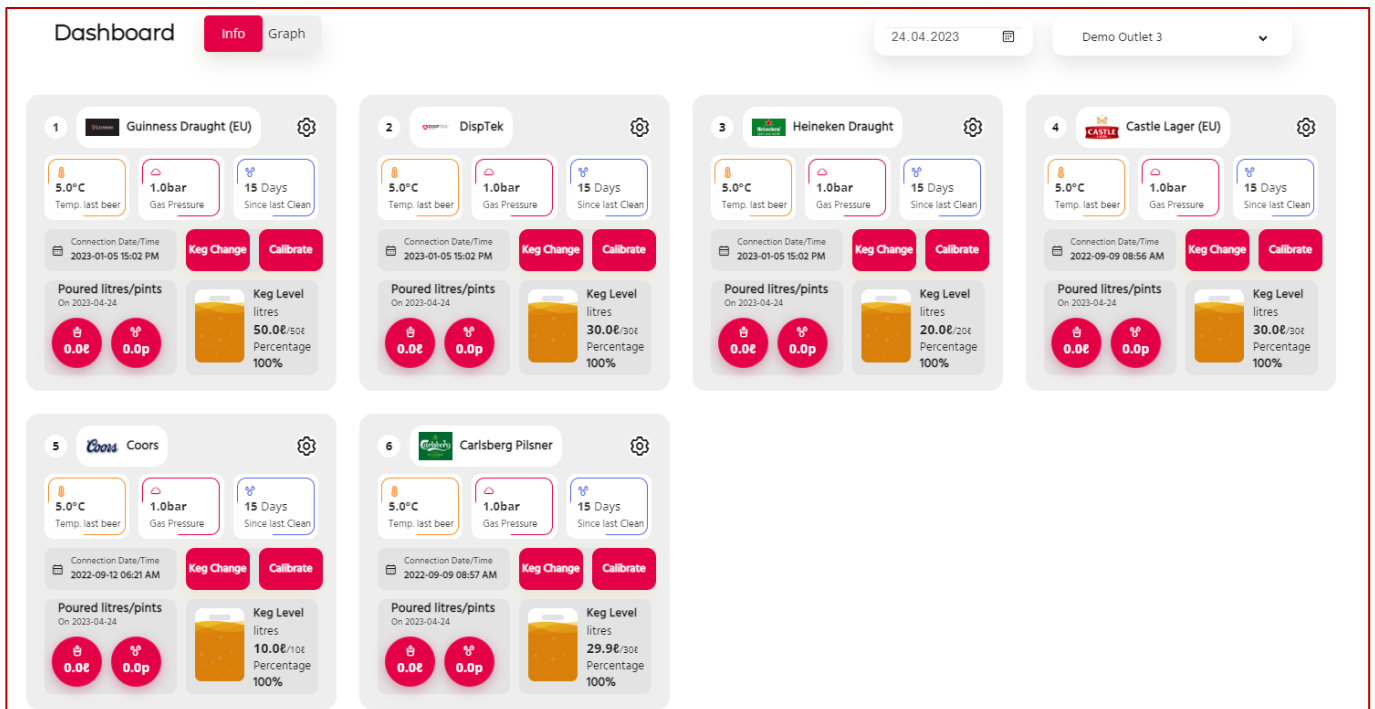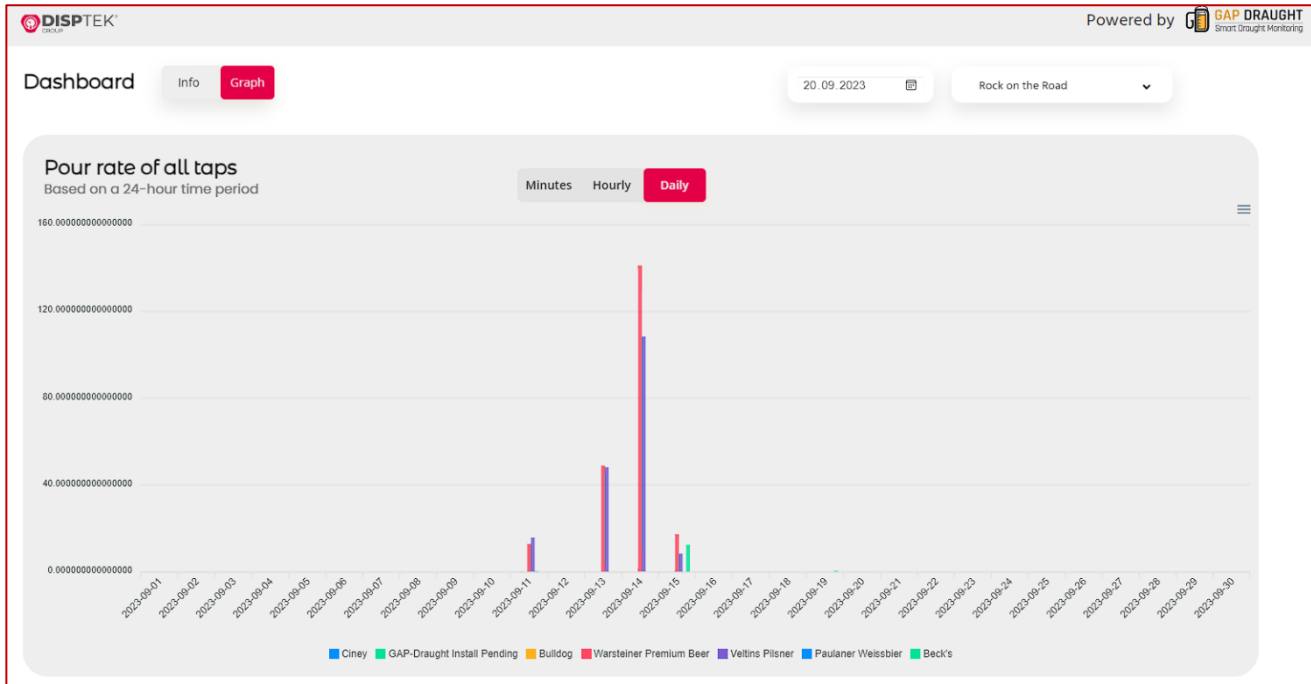
Spear:

The spear will be available as S-Type with all different Keg-Neck connections (threaded and bayonet). Inside the spear the gasket assembly has the NFC Tag embedded. It is available for new spears and gasket assemblies' for refurbishing purpose, both equipped by DispTek. The Tag is a passive product, means it must be triggered with the reading antenna. It is not in contact with the beverage or cleaning but resistance against the common cleaning temperature and chemicals. The cover, with the Tag inside, requires a dedicated design of Gasket, which is not the same as the DSI- Standard Gasket before. The assembly made of gasket, Tag and Cover fulfil the EU and FDA requirements for food contact/packaging.

On the Tag the data is password secured in terms of writing. So, nobody else than the brewery can re-write data like: brewery, filled brand, keg size, best-before-date, filling date, empty after opening date, last refurbish date, etc. The serial number (MAC) is the unique identifier of the Tag/Spear/Keg and can not be changed. In case of using NFC Tag Spears for D-iDRAFT installation the automatic virtual keg change, the brand and volume setting, the BBD-warning and empty-to-warning can be supported!
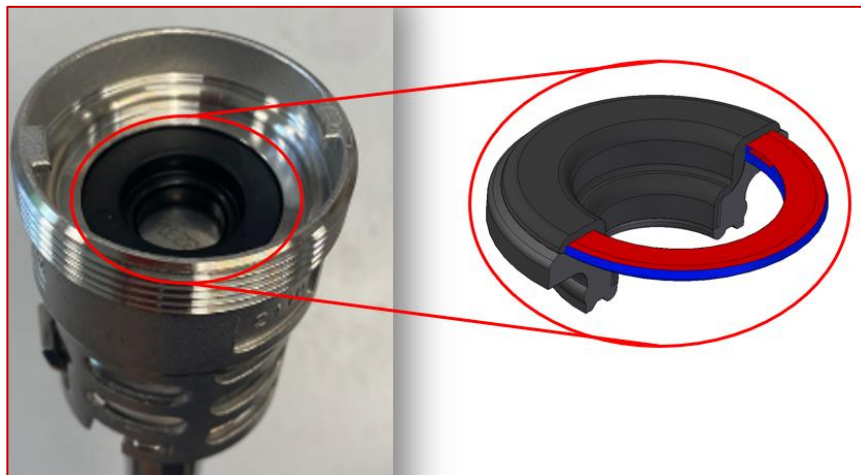
3. Installation

a. Dispense Equipment

Find a proper place to wall mount the Gateway close to a power supply (110-230 VAC) or extend the power supply to preferred place for the Gateway. Do the wall mount of the Gateway, please make sure if this version of plugs (given with the unit) will fit with the type of wall you want to fix to.

MICRO MATIC

Do initial proper cleaning of the Coupler, just in case residues from production will be in/on it. And then install the Coupler by attaching it to the Gas- and Beer-Line. Be careful with torquing the thread connections to not damage the unit. We recommend max. torque of 3 Nm, like JohnGuest connections are design as well. If you over torque, the probe will turn and snap a bit around, easy to turn it back. Connect the cable from Coupler to GW. In case you need longer cables, please reach out to DispTek WebShop. With cable strips you can simply fix the cable to the gas line to find a proper way to reach the wall where the Gateway is located. Ideally fix the cable to the wall until you can connect the plug into the socket at the bottom of the Gateway.

To connect the Tap to your dispensing tower, you simply screw the shank with standard G5/8 thread to the tower's connector. Now you can align the Tap in vertical position by connecting it to the shank. For fixing the Nozzle kit on the Tap you have to unscrew the handle first and put the Cap (2.11) on top / around it. Fix the handle of the tap again. Then push from bottom the Nozzle kit with the 2 O-Rings inside the beer outlet until the very end and fix it with the Cap (2.11) on top. To do so, slide the Cap (2.11) horizontal until it's in position and secure it finally with the side screws (2.10). To insert or replace batteries, do it vise versa and open the lid from inside where the batteries are located.

During the installation of equipment, take note about the different beverage lines from coupler to Tap and e.g. name them with numbers from 1 to X. According to this you connect the coupler cables into the Gateway. This will be necessary during next step (Start-Up) and match the Bluetooth Taps to the correct lines. See also following picture of installation example.
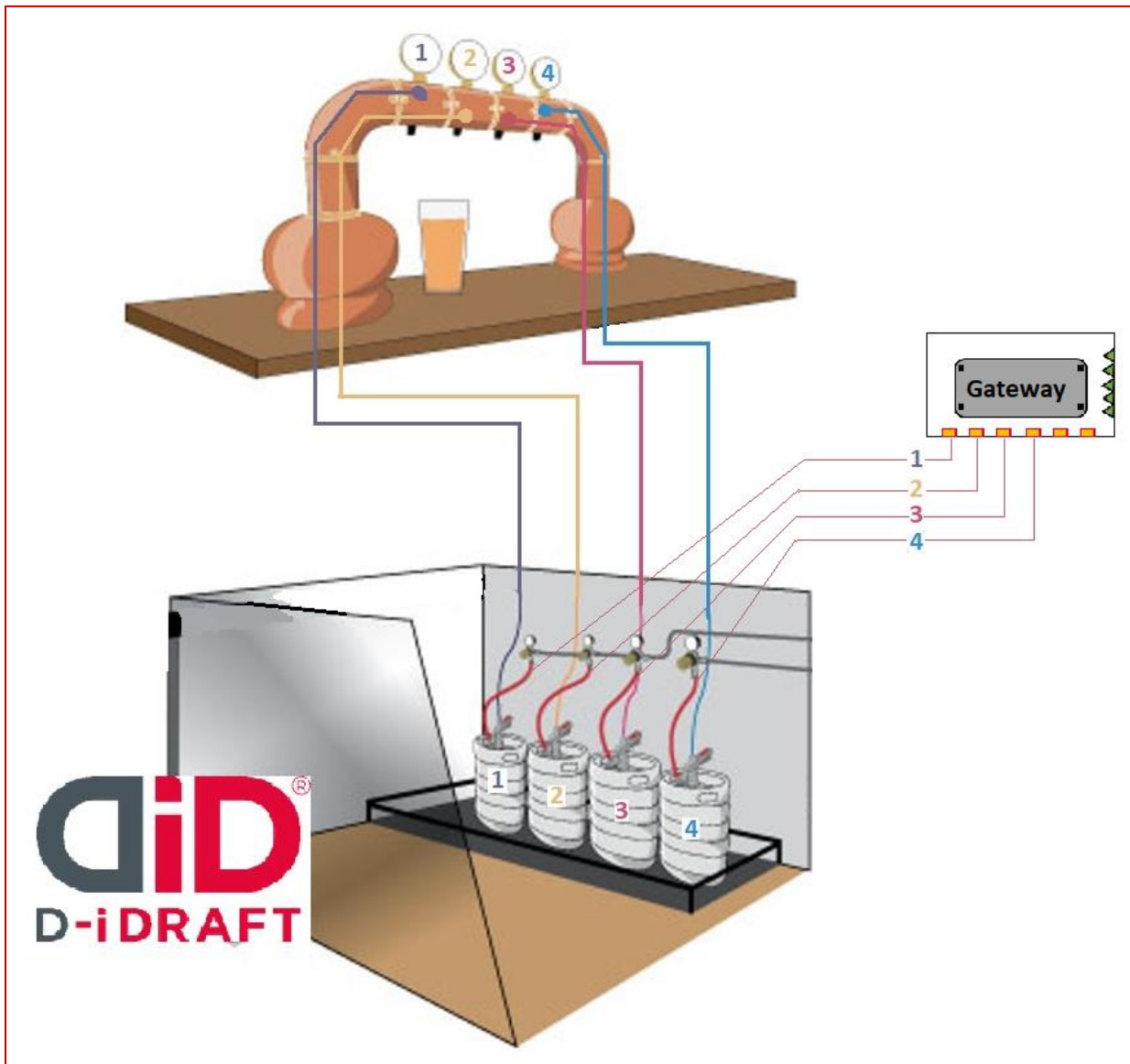
b. Keg Spears

According the alignment between brewery and DispTek, the NFC Tag inside the spears will be initialised with the right information for field-test. Further the required passcode will be shared with the brewery to enable new writing after filling.

4. Start up

When the installation of the above chapter 3. was made, make sure you do the start-up for only one Gateway including the Taps and Coupler, at the same time, in case you have multiple Gateways in place:

I. Power on the Gateway, LED will show status

II. To Connect the Gateway to Web you have three options. After successful connection the LED at 5.5 will turn on. Check network settings to allow the Gateway can connect with the web.

WiFi:
   a. Press button 5.4 at the Gateway for 5 sec.
   b. Get your device (mobile/tablet/PC), search for WiFi access points and choose: "D_iGatewayAP" (available a short while). Especially on Android-devices you may have to browse for the address 192.168.4.1.
   c. a popup will occur to choose local WiFi and insert password of local WiFi
   d. The Gateway will now connect to the local WiFi and save the password settings
   e. In case of weak connection, decide about the need of additional WiFi antenna

LAN/Ethernet:
   a. Attach the LAN/Ethernet cable to the Gateway socket 5.6
   b. Inside socket 5.6 the LED must turn on when connected successfully

4G mobile network: (SIM Card is pre-activated by DispTek)
   a. Get your mobile and check for 4G connection at the point of installation and maybe outside the room/building.
   b. Decide about the need of relocate the external 4G antenna to an different place, maybe outside the biulding.
   c. When the Gateway is powered and 4G Version on hand, the connection is made automatically.

III. Go to WebApp page by using the link inside the invitation/e-mail you´ve got from your brewery/franchiser.

IV. Create your credentials by registering yourself.

V. Follow the guide to fill in your basic information.

VI. Insert the EUI (e.g. D4:CF:80:74:37:96) of the Gateway (or multiple GWs) to allocate to your account and specific outlet.

VII. Insert the batteries into all the Taps to turn them on and the Bluetooth connection to the Gateway will start.

VIII. Please check the EUI (e.g. D4:CF:80:74:37:96) of each Tap, printed on the back of the device and allocate the Taps inside the WebApp to the beverage line where it is installed to. It´s important that this will match with the beverage lines where the couplers are connected to. Therefore go to "management" >> "Taps installs", chose your Outlet and the Gateway connected, click on "edit".

MICRO MATIC
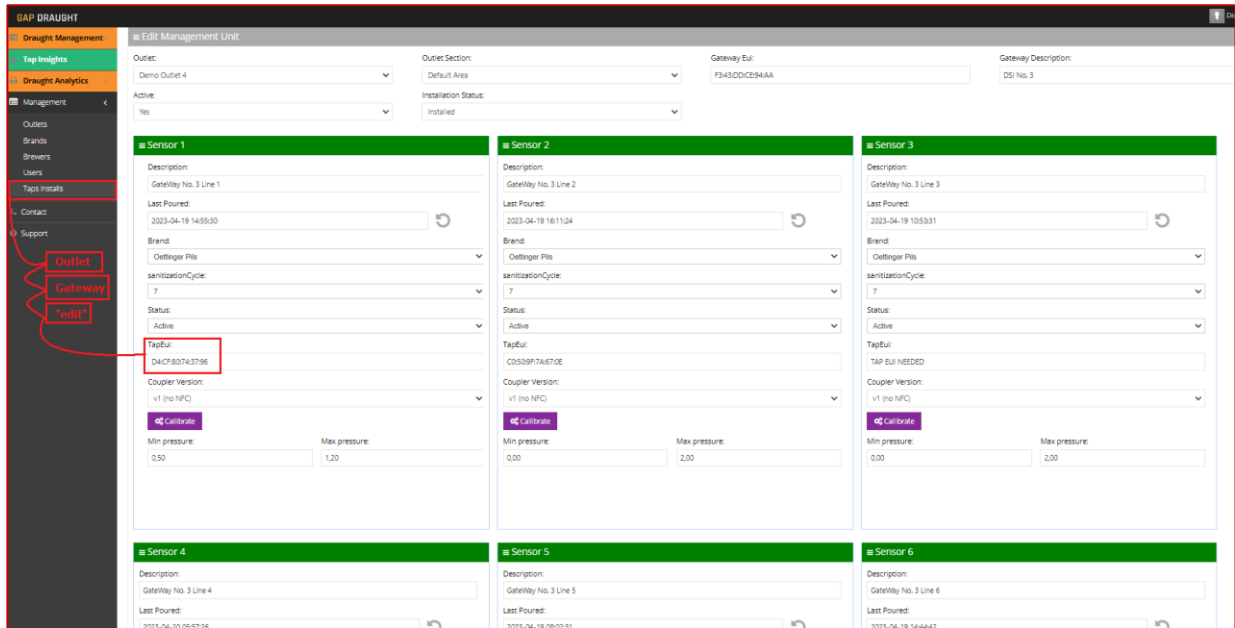
Here you further can give a name for that line and gas pressure thresholds.

IX. Set here as well the type of keg couplers you are using, line per line. It could be the Coupler v1 (non-NFC) or the Coupler v2 (with-NFC).

X. Follow the point I. - IX. (Start-up) again in case you are using more than one Gateway.

XI. Open the gas supply to the coupler and check the coupler / connection for potential leakages.

XII. Connect the coupler to keg by fixing the bayonet and then activate the handle until the lower position is secured stable.

XIII. Start pouring your beverage per each line and go to the "Calibrate"-Mode inside the WebApp. Here you need to set the flow rate of the line (e.g.) in liter/minute.

Make sure the flow rate will be updated once you´ve made a change of pressure and / or the compensator at the Tap. Therefore you have different possibilities:

 a. Set the flowrate directly because you are aware of it by measuring.

 b. Pour a glass/cup of beer where you know the volume of AND measure the time (seconds) for it. Set both in the calibrate mask.

 c. Pour a glass/cup of beer where you know the volume of AND set this for the "last pour".

IMPORTANT: The glass/cup must be poured with one shot! Helpful will be a cup with a scale or using a weight scale. Do consider just liquid, no foam.

XIV. In case you have not set the gas pressures thresholds for min. and max. during (VIII), go back to Dashboard and click on the small gear wheel.

You will be able to run the D-iDRAFT now.

5. Operation

The beverage equipment can be used like the well-known standard hardware. But to operate it correctly we have some recommendations especially for the proper use of D-iDRAFT:

- Place a tablet / mobile device at or close to the bar where you are tapping beer out of the new Taps. This will help for continuous check of the WebApp, to see remaining Keg volumes, Gas pressures, temperatures, and to receive helpful messages and warnings, etc.
- Set your device to "remember me" and stay connected. In case of using a tablet placed at the bar, turn off the screen saving mode. So, you can ensure it´s always on/available.
- Check and follow the alerts and messages of the WebApp. This will help you to detect values out of range/threshold, to manage the Keg-change and couple of others.

- Be aware, in case of not using the kegs equipped with NFC, the D-iDRAFT will not do the auto-Keg-Change. This is per quick drag-&-drop necessary to do by the barkeeper/staff inside the WebApp.
- Do not mix up the Coupler (cable connections to Gateway) and Taps, once installed according to the example of numbered lines. If happened, you can again allocate the EUI of the Taps new or swap them at the tower to origin position.
- Do not open the electronics (Gateway and Nozzle Kit). This is not allowed and especially not for non-electrical staff.
- Do not rinse of flush the Gateway and Nozzle Kit with water.
- Treat all units carefully.

6. Cleaning/Service

The beverage equipment can be serviced and cleaned like the well-known standard hardware. Especially the standard line cleaning with devices in place can be done like before. Inside with WebApp you also can manage the cleaning status and threshold (#-days) by when you must perform the next cleaning. In case you connect the coupler with NFC Antena to an cleaning bottle equipped with a special NFC Cleaning Spear, the App will automatically switch to cleaning and the poured volumes will not be counted and finally the cleaning status will be updated. IN case of manual cleaning, the perhaps recognized and counted volumes can be declared inside the WebApp to cleaning an been taken out of the counter. This also will reset the cleaning status.

And to change the batteries of the Tap you can simply remove the Lid (2.6) at the bottom, even with the full Tap + Nozzle Kit in place.

Cleaning of the devices (Coupler, Tap, Gateway)
The Gateway should not require cleaning at all. But in case it´s somehow dirty, please use a sponge or cleaning wipe to carefully clean it from outside.
In case of cleaning the Tap, you have to remove the little side screws (2.10) on the left and ride side of the housing. Then the cap (2.11) on top can be opened by sliding it to the back and then remove the complete Nozzle kit by pulling it down, out of the nozzle of the Tap. Then you can unscrew the Tap from the shank and disassemble the Tap like well known, to clean all components especially inside. The Nozzle kit (with batteries and electronic inside) can be cleaned from the outside by using a sponge or cleaning wipe. For the embedded nozzle you have to use a brush and then carefully clean inside.
Otherwise, wile cleaning the lines, the nozzle will be cleaned as well, as long as the kit stays at the Tap.
Do not immerse the Nozzle Kit in cleaning fluids.
For Coupler cleaning unplug it from the cable to the Gateway as well as the gas- and beer-line. Then the handle is easy to remove by pressing the axis out of the body. If you do so, the positioning snap of the axis itself will be pushed inside. Then remove the electronic and sensor assembly. But to remove the electronic and sensor assembly you have to:

   I.   In case of the Coupler <u>Version-2 with NFC</u>, remove the main CO2-Gasket from the Body by using the axis O-Ring removal tool. This helps to avoid scratches on the Body and Antenna.
   II. Now pull downwards the NFC Antenna. This has a pin and Socket connection to the electronic. Do not remove the Electronic from the Coupler with the Antenna still connected. This will cause damages.
   III. Pull the Flow-Sensor up, out of the pocket.
   IV. Then press the snaps holding the Gas-Pressure-Sensor and pull it out straight.
   V.   Last step is removing the electronic from the coupler body by pressing the top snap and tilt it away. Electronic with Sensors is now removed from the coupler.

The Gas-Adapter can be removed from the coupler body as well by pressing the two snaps and then pull it out straight. Now you can get the probe to the top direction out of the body. It is <u>not</u> possible to press the probe down and out of the body to bottom direction.

After you did this, the coupler components itself can be cleaned like well known.

If you assemble it again, do it exactly the other way around. Further please make sure, the magnet NRV the incl. holder is placed inside the Probe. We remind you again, to assemble first the coupler and then attach the sensors with electronic.

⚠️ Plastics of coupler and tap nozzle are well resistant to standard beverage cleaning solvents. But it´s highly recommended to check with your specific cleaning solutions.

7. Trouble Shooting

- Basic trouble shooting:

Observation	Issue	ToDo	What happens
WebApp is not updating	Gateway could be offline	Check Gateway Status (LED 5.5) and perhaps restart with Button 5.3	Gateway will re-connect
Missing Temperature upload	Bluetooth to Gateway could be interrupted. --- Batteries could be empty.	Check Tap Status (LED 2.8) and perhaps restart with Button 2.9 --- Check Warnings on Batteries Status in WebApp and if necessary change Batteries	Tap will re-connect
Missing Pressure upload	Cable from coupler to Gateway may not plugged in proper	Check cable at Coupler and Gateway as well as Status LED 5.9	Pressure will be updated next event
Missing Poured Volume / Keg Level upload	Cable from coupler to Gateway may not plugged in proper --- Magnet NRV not installed proper inside the probe. --- No flow rate calibration made inside the WebApp --- Flow Sensor not placed correct at the coupler	Check cable at Coupler and Gateway as well as Status LED 5.9 --- Place Magnet NRV and Captive inside properbly --- Check flowrate and re-calibrate --- Put Flow Sensor 3.8.3 inside the pocket in full	Poured Volume / Keg Level will be updated next event
Missing NFC read upload	Cable from coupler to Gateway may not plugged in proper. --- NFC Antenna not placed and connected to electronic correct	Check cable at Coupler and Gateway as well as Status LED 5.9 --- Make sure the NFC Antenna is connected by the PIN-to-Socket with the Electronic	NFC read will be updated next event
Negative Keg Volume	Keg changed in installation made but missing keg-change inside WebApp	Do Keg-Change in Web-App with using the timestamp from the real change	The poured volumes from timestamp until now will be calculated from the new keg

- Check advanced trouble shooting guide online, at: www.d-idraft.com/troubles

8. Disposal:

Batteries and electronic products shall not be disposed in regular trash bin. These products must be disposed according to the local requirements.

9. Spare parts – visit our WebShop: www.disptek.shop

p/n 811452: Coupler Electronics v1 (pressure and flow)
p/n 811453: Coupler Electronics v2 (incl. NFC)
p/n 611983: Coupler Cable 5m
p/n 611984: Coupler Cable 10m
p/n 611985: Coupler Cable 15m
p/n 611986: WiFi Antenna for Gateway
p/n 611987: Power Plug for Gateway
p/n 300682: Installation Kit for Gateway (screws, plugs, strips and manual)
p/n 910860: S-Type Spear Gasket with NFC Tag (for refurbishment)
p/n … … : S-Type Coupler Spare parts (O-Rings, Magnetic NRV, CO2 Seal, LipValve)

10. Contact

  +39 (0) 35 672 361 | +49 (0) 23 85 772 0

  D-iDRAFT@Micro-Matic.com

11. Help

QR-Codes:

Webshop   Manual Download   Link to WebApp   trouble shooting guide

12. Approvals

FDA and EU Food approvals: The beverage touched components (Nozzle of the Tap, Coupler and Spear cover) are EU 1935/2004 and FDA 21 CFR approved

European Union: CE approval = Tap, Coupler & Gateway fulfill the European standards also regarding the RED

DSI MICRO MATIC

EU Declaration of Conformity

$C \epsilon$

The producer / distributor

DSI Micro Matic GmbH
Oberster Kamp 20
59069 Hamm
Germany

herewith declares that the following product

Product designation:	D-iDraft WiFi + Ethernet	
Product number:	consisting of:	
	Gateway WiFi + Ethernet	300679
	Tap electronics	710100
	Coupler electronics	811453

complies with all relevant requirements of the applicable legal provisions (hereinafter) – including their revisions in effect at the time of declaration. The responsibility for issuing the declaration of conformity lies with the manufacturer.

Following legislations were applied:

RED	2014/53/EU
RoHs	2011/65/EU
WEEE2	2012/19/EU

Following harmonized standards were applied:

IEC 60650-1:2005	ETSI EN 300 328 V2.1.1 (2016-11)
ETSI EN 301 489-1:V2.2.2	ETSI EN 300 328 V2.2.1 (2019-07)
EN301 489-3:V2.1.1	ETSI EN 300 328 V2.2.1 (2019-04)
EN 301 489-17:V3.2.0	ETSI EN 300 330 V2.1.1 (2019-04)
EN 61326-1:2013	
EN 50581:2012	EN IEC 63000:2016

Location:	Hamm (Westf.)
Date:	06.02.2024

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(CEO Björn Hoffmann)

DSI Micro Matic GmbH
Geschäftsführer: Björn Hoffmann,
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DSI MICRO MATIC

EU Declaration of Conformity

$C \epsilon$

The producer / distributor

DSI Micro Matic GmbH
Oberster Kamp 20
59069 Hamm
Germany

herewith declares that the following product

Product designation:	D-iDraft 4G	
Product number:	consisting of:	
	Gateway 4G	300680
	Tap electronics	710100
	Coupler electronics	811453

complies with all relevant requirements of the applicable legal provisions (hereinafter) – including their revisions in effect at the time of declaration. The responsibility for issuing the declaration of conformity lies with the manufacturer.

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Location:	Hamm (Westf.)
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(CEO Björn Hoffmann)

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